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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,004	07/23/2001	Moo-Youn Park	5000-1-214	3695

23565 7590 07/24/2002

KLAUBER & JACKSON
411 HACKENSACK AVENUE
HACKENSACK, NJ 07601

EXAMINER

PETKOVSEK, DANIEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,004

Applicant(s)

PARK, MOO-YOUN

Examiner

Daniel J Petkovsek

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/16/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/23/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Jang et al. International Publication No. W.O. 00/11509.

Regarding claims 1 and 5, Jang et al teach (Fig 1) an apparatus for fabricating an optical fiber comprising the following: a UV laser source 100 for projecting light that becomes perpendicular to the optical fiber 112, a cylindrical lens 104 for focusing the laser light source toward a concavely shaped dispersion lens 106 (the mobility of which is shown in Fig 1 with the movable distance x) with the ability to change the image of light as the dispersion lens 106 moves toward and away from the mask, an amplitude mask 108 (spaced apart from fiber at pre-determined distance y) having an array of elongated slits which light is transmitted through, useful for many periods of light wavelength. This apparatus provides a method for directing a light beam onto an optical fiber, orienting a 1st lens 104 to focus the beam, orienting a concavely-shaped 2nd lens 106 to diverge the light beam, moving the 2nd lens 106 along the perpendicular direction x to change the light image, and providing the amplitude mask 108 with at least one light transmitting region, positioned at a fixed location y away from the optical fiber, which clearly, fully meets Applicant's claimed limitations. Regarding claim 2, Jang et al '509 teach a

concavely shaped dispersion lens 106. Regarding claims 3 and 7, Jang et al '509 teach a mobile distance x , which will change the image as the dispersion lens 106 is moved.

Regarding claim 4, Jang et al '509 teach a pre-specified distance y for the mask 108 to be spaced apart. Regarding claim 6, Jang et al '509 teach a mask 108 with an array of openings for the transmittal of the laser source.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 8-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Kim et al. U.S.P. Publication Application 2001/0008466 A1.

Regarding claim 8, Kim et al. teach a method (Fig 3) for fabricating an optical fiber grating comprising the steps of directing a light beam 31 onto a first lens 34, which focuses the light beam in a perpendicular direction, the light beam then oriented by a second concavely shaped lens 35 (shown to be able to traverse the range of d_1 to d_2 from Fig 3 to Fig 6 (Col 3, 1st paragraph)), which diverges the light beam onto the mask 36 where exposure light transmits to the fiber 37, which is positioned a predetermined distance away from the mask 36, which clearly, fully meets Applicant's claimed limitations. Regarding claim 9, Kim et al teach positioning mask 36 a pre-determined position away from optical fiber 37. Regarding claim 10, Kim et al teach a mask 36 with an array of openings for the transmittal of the laser source. Regarding claim 11, Kim et al teach a concavely shaped lens 35.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The following patents are cited to further show the state of the art with respect to fiber gratings:

U.S.P. No. 6,275,631 to Jang.

U.S.P. No. 6,130,973 to Lauzon et al.

U.S.P. No. 6,072,926 to Cole et al.

U.S.P. No. 5,604,829 to Bruesselbach


EP 0 805 365 A2 to Nakai et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (703) 305-6919. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9321.

July 18, 2002


Akm E. Ullah
Primary Examiner

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